

**IN THE CLAIMS:**

This listing of claims will replace all prior versions and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) ~~An apparatus~~ A personal computer, comprising:

[a] at least one microchip including ~~a personal computer with a~~ at least one general purpose microprocessor with at least one control unit and at least two processing units on said at least one microchip; [and]

[a] at least one Faraday Cage surrounding at least [a] one portion of said at least one microchip;

said at least one microchip including at least one inner firewall being configured to deny access to said at least one control unit from said at least one network;

said at least one inner firewall being located between said at least one control unit and at least one of said at least two processing units;

said at least two processing units having at least one network connection to at least one network of computers; and

said at least one network of computers including at least the Internet.

2. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein [an] at least one operating system ~~associated with said apparatus~~ of said personal computer includes at

least a number of independent components, each component having its own said at least one inner firewall.

3. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip includes [a] at least one special purpose microprocessor.

4. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip ~~substantially~~ includes [a] at least one personal computer system on said microchip.

5. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip is at least partly surrounded by said at least one Faraday Cage.

6. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip is ~~substantially~~ surrounded by said at least one Faraday Cage.

7. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip is ~~substantially~~ surrounded by ~~more than one~~ at least two Faraday Cages.

8. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip is configured for [a] said at least one network connection including wave division multiplexing or dense wave division multiplexing.

9. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said at least one microchip is configured for a ~~wireless~~ said at least one network connection, said at least

one connecting being wireless and including CDMA (code division multiple access) or wideband CDMA.

10. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said ~~apparatus~~ at least one microchip includes at least two of said at least one ~~a plurality of~~ inner ~~firewalls~~ firewall configured to operate within a said personal computer, ~~which is~~ said personal computer configured to operate in [a] said at least one network of computers;

~~said personal computer including at least two microprocessors;~~

~~said plurality of firewalls~~ at least a first of said at least one inner firewall is configured to deny access to at least ~~a first microprocessor~~ said at least one control unit of said personal computer by ~~another~~ at least one other computer through [a] said at least one network connection with said personal computer during [a] at least one shared operation; and

~~said plurality of firewalls~~ at least a second of said at least one inner firewall is configured to allow access to at least ~~a second microprocessor~~ one of said at least two processing units of said personal computer by said ~~another~~ at least one other computer through said at least one network connection with said personal computer during said at least one shared operation.

11. (Currently Amended) The ~~apparatus~~ personal computer of claim [10] 1, wherein [a] at least one configuration of said at least one inner firewall is ~~capable of being changed~~ configurable by [a] at least one user of said personal computer or by [an] at least one authorized network administrator.

12. (Currently Amended) The ~~apparatus~~ personal computer of claim 11, wherein ~~said~~ at least one change in a ~~firewall~~ said at least one configuration of said at least one inner firewall is made, at least in part, by using field-programmable gate arrays (FPGA's).

13. (Currently Amended) The ~~apparatus~~ personal computer of claim 11, wherein ~~said~~ at least one change in a ~~firewall~~ said at least one configuration of said at least one inner firewall involves [a] at least one motherboard.

14. (Currently Amended) The ~~apparatus~~ personal computer of claim 11, wherein ~~said~~ at least one change in a ~~firewall~~ said at least one configuration of said at least one inner firewall involves [a] at least one manual switch.

15. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein ~~said~~ at least one firewall includes [a] at least one hardware component.

16. (Currently Amended) The ~~apparatus~~ of claim 10, wherein ~~said~~ at least one firewall includes [a] at least one software component.

17. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein ~~said~~ at least one firewall includes [a] at least one firmware component.

18. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein ~~said~~ at least one shared operation is initiated by [a] at least one user of said personal computer.

19. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein ~~said~~ at least one shared operation is initiated by said at least one other ~~another~~ computer.

20. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein at least a part of said personal computer is idled by [a] at least one user of said personal computer.

21. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one firewall denies access at least temporarily to [a] at least one microprocessor of said personal computer by said at least one other ~~another~~ computer through said at least one network connection during said at least one shared operation.

22. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one firewall allows access at least temporarily to [a] at least one microprocessor of said personal computer by said at least one other ~~another~~ computer through said at least one network connection during said at least one shared operation.

23. (Cancelled)

24. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one network of computers includes at least a World Wide Web.

25. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one network connection includes [an] at least one optical fiber connection ~~substantially~~ directly to said personal computer.

26. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said personal computer is configured for a dense wave division multiplexing (DWDM) network connection.

27. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said personal computer is configured to function as one of [a] at least one master and [a] at least one slave in said at least one shared operation.

28. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said personal computer is configured to be controlled by [a] at least one remote master controller.

29. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one shared operation is ~~one of~~ parallel processing and/or multitasking.

30. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said at least one other ~~another~~ computer is at least one other ~~another~~ personal computer connected via [a] at least one peer-to-peer connection to said personal computer.

31. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said personal computer is configured to communicate with said at least one network through [a] at least one network connection having at least a minimum speed of data transmission that is greater than at least a peak data processing speed of said personal computer.

32. (Currently Amended) The ~~apparatus~~ personal computer of claim 31, wherein at least one microprocessor of said personal computer is configured to communicate with said at least one network through [a] at least one connection having at least a minimum speed of data transmission that is greater than at least a peak data processing speed of said at least one microprocessor.

33. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least four ~~microprocessors~~ processing units.

34. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least eight ~~microprocessors~~ processing units.

35. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 16 ~~microprocessors~~ processing units.

36. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 32 ~~microprocessors~~ processing units.

37. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 64 ~~microprocessors~~ processing units.

38. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 128 ~~microprocessors~~ processing units.

39. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 256 ~~microprocessors~~ processing units.

40. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 512 ~~microprocessors~~ processing units.

41. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ at least one microchip has at least 1024 ~~microprocessors~~ processing units.

42. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said firewall is ~~substantially~~ [a] at least one hardware component.

43. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein said ~~personal computer~~ said at least one network connection is configured for [a] at least one wireless connection.

44. (Currently Amended) The ~~apparatus~~ personal computer of claim 43, wherein said at least one wireless connection is to said at least one network of computers.

45. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein a part of an operating system ~~associated with said apparatus~~ of said personal computer includes at least two [a number of] independent components, each component having its own said at least one inner firewall.

46. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein an application program ~~associated with said apparatus~~ of said personal computer includes at least two [a number of] independent components, each component having its own said at least one inner firewall.

47. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein a part of an application program ~~associated with said apparatus~~ of said personal computer includes at least two [a number of] independent components, each component having its own said at least one inner firewall.



48. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein power is interrupted to at least one [a] network-accessible portion of [a] at least one volatile memory of said personal computer to erase all files in said at least one network-accessible portion, said at least one network-accessible portion being located outside said at least one ~~said~~ inner firewall.

49. (Currently Amended) The ~~apparatus~~ personal computer of claim 10, wherein all files are overwritten in at least one [a] network-accessible portion of [a] at least one non-volatile memory of said personal computer to erase ~~said~~ all files, said at least one network-accessible portion being located outside said at least one [said] inner firewall.

50. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said ~~apparatus~~ at least one microchip includes [a] at least two of said at least one ~~plurality of~~ inner [firewalls] firewall configured to operate within [a] said personal computer, which is configured to operate in [a] said at least one network of computers;

~~said personal computer including at least two microprocessors and~~ at least one microchip including at least two memory hardware components;

~~said plurality of firewalls~~ at least a first of said at least one inner firewall is configured to deny access to at least a first ~~microprocessor~~ of said at least two processing units and at least a first of said at least two memory hardware components ~~component~~ of said personal computer by ~~another~~ at least one other computer through [a] said at least one network connection with said personal computer during [a] at least one shared operation; and

~~said plurality of firewalls~~ at least a second of said at least one inner firewall is configured to allow access to at least a second ~~microprocessor~~ of said at least two processing units and at

least a second of said at least two memory hardware components ~~component~~ of said personal computer by said ~~another~~ at least one other computer through said at least one network connection with said personal computer during said at least one shared operation.

51. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said at least one firewall is configured to deny access to at least said second of said at least two memory hardware component of said personal computer by said personal computer during said at least one shared operation.

52. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first of said at least two memory hardware components ~~component~~ is [a] at least one hard drive device.

53. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first of said at least two memory hardware components ~~component~~ is [a] at least one flash memory device.

54. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first second of said at least two memory hardware components ~~component~~ is [a] at least one flash memory device.

55. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second of said at least two memory hardware components ~~component~~ is [a] at least one random access memory (RAM) device.

56. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second of said at least two memory hardware components ~~component~~ is [a] at least one hard drive device.

57. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second of said at least two memory hardware components ~~component~~ is [a] at least one read-only compact disk drive (CD-ROM) device.

58. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second of said at least two memory hardware components ~~component~~ is [a] at least one read-only digital video disk drive (DVD) device.

59. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first of said at least two memory hardware components ~~component~~ includes [a] at least one BIOS.

60. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein [a] at least one user of said personal computer retains preemptive control of at least said second memory of said at least two hardware components ~~component~~.

61. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein [a] at least one user of said personal computer retains preemptive control of all components of said personal computer.

62. (Cancelled)

63. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said personal computer functions as [a] at least one master in said at least one shared operation.

64. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said personal computer functions as [a] at least one slave in said at least one shared operation.

65. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second memory of said at least two hardware components ~~component~~ is volatile memory.

66. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first memory of said at least two hardware components ~~component~~ is non-volatile memory.

67. (Currently Amended) The ~~apparatus~~ personal computer of claim 66, wherein said non-volatile memory is at least one of a magnetic random access memory (MRAM) or ovonic unified memory microchip

68. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second memory of said at least two hardware components ~~component~~ duplicates a first memory of said at least two hardware components ~~component~~.

69. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said first memory of said at least two hardware component is read and write memory.

70. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein said second memory of said at least two hardware components ~~component~~ is read-only memory.

71. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein any hardware component, software file, or firmware file can have its own said at least one inner firewall.

72. (Currently Amended) The ~~apparatus~~ personal computer of claim 50, wherein at least two of a hardware component, a software file, or a firmware file can be grouped exclusively together inside [an] said at least one inner firewall.

73. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said ~~apparatus~~ at least one microchip includes a ~~plurality of inner firewalls~~ at least two of said at least one inner firewall configured to operate within [a] said personal computer, which is configured to operate in [a] said at least one network of computers;

~~said personal computer including at least one microprocessor and~~ at least one microchip including at least two memory hardware components;

~~said plurality of firewalls~~ at least a first of said at least one inner firewall is configured to deny access to at least a first of said at least two memory hardware component of said personal computer by another computer through [a] said at least one network connection with said personal computer during [a] at least one shared operation; and

~~said plurality of firewalls~~ at least a second of said at least one inner firewall is configured to allow access to at least a second of said at least two memory hardware components ~~component~~ of said personal computer by said at least one other computer through said at least one network connection with said personal computer during said at least one shared operation.

74. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said personal computer has [a] at least one controller component that controls said microprocessor of said personal computer.

75. (Cancelled)

76. (Currently Amended) The ~~apparatus~~ personal computer of claim 1, wherein said personal computer system is ~~substantially~~ contained in ~~a respective single~~ said at least one microchip.

77. (Currently Amended) The ~~apparatus~~ personal computer of claim 76, wherein said personal computer system is ~~substantially~~ contained in ~~a single respective~~ said at least one microchip having a ~~plurality of microprocessors~~ more than one of said at least one general purpose microprocessor.

78. (Cancelled)

79. (Currently Amended) The ~~apparatus~~ personal computer of claim [78] 1, wherein said personal computer is at least one appliance that includes at least one of a handheld personal digital assistant, a telephone, a pager, a television, a game, a videotape player/recorder, a video camera, a compact disk (CD) player/recorder, a digital video disk (DVD) player/recorder, a radio, a camera, a printer, a fax machine, and an automobile.

80. (Currently Amended) ~~An apparatus~~ A personal computer, comprising:

[a] at least one microchip including [a] at least one general purpose microprocessor [and]  
~~one or more photovoltaic cells~~ with at least one photovoltaic cell located on said at least one  
microchip.

81. (New) The personal computer of claim 80, wherein said general purpose microprocessor includes at least one control unit and at least two processing units;

said at least one microchip including at least one inner firewall being configured to deny access to said at least one control unit from said at least one network;

said at least one inner firewall being located between said at least one control unit and at least one of said at least two processing units;

said at least two processing units being connected to at least one network: and

said at least one network including at least the Internet.

82. (New) A personal computer, comprising:

at least one microchip including at least one general purpose microprocessor with at least one photovoltaic cell located on said at least one microchip; and

at least one Faraday Cage surrounding at least one portion of said at least one microchip.

83. (New) The personal computer of claim 82, wherein said general purpose microprocessor includes at least one control unit and at least two processing units;

said at least one microchip including at least one inner firewall being configured to deny access to said at least one control unit from said at least one network;

said at least one inner firewall being located between said at least one control unit and at least one of said at least two processing units;

said at least two processing units being connected to at least one network: and

said at least one network including at least the Internet.

84. (New) The personal computer of claim 1, wherein said at least one inner firewall includes at least one hardware component;

the at least one inner firewall being configured to allow and/or deny access to portions of the at least one microchip both to at least one user of the personal computer and to at least one user of the at least one microchip from at least one network of computers during at least one shared use of the at least one microchip.

85. (New) The personal computer of claim 84, wherein the shared use comprises shared file resources and/or message passing.

86. (New) The personal computer of claim 84, wherein the shared use includes unauthorized shared use, including intrusion by hackers from outside the personal computer.